REMARKS

Claims 1-33 are pending. Claims 1-33 are rejected. The figures are objected to. The Abstract is objected to. Claims 1, 2, 5, 7, and 10-14 have been amended. New figures have been submitted. The Abstract has been amended. No new matter has been added.

Objections to the Drawings

Figures 1-5 were objected to because of informalities appearing therein. New corrected drawings in compliance with 37 CFR 1.121(d) accompany this response. Applicants assert that these informalities have been remedied, and request that this objection be withdrawn.

Objection to the Abstract

The Abstract was objected to as being in excess of 150 words. The Abstract has been amended. Applicants assert that the Abstract is now in compliance with 37 CFR 1.72, and request that this objection be withdrawn.

35 U.S.C. 101 Rejections

Claims 1-14 are rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter. Specifically, the rejection suggests that Claim 1 recites a method that can be implemented by the mind of a person or by the use of a pencil and paper. Claims 2-14 are rejected because of their dependence on Claim 1. Claim 1 has been amended.

Applicants assert that Claims 1-14 overcome the grounds for rejection under 35 U.S.C. 101, and request that this rejection be withdrawn.

35 U.S.C. 102(e) Rejections

Claims 1, 4, 7, 8, 10-15, 18-24, and 26-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Cooke et al., U.S. Patent Application No. 2002/0016706.

The Examiner is respectfully directed to independent Claim 1, which, as amended, recites that an embodiment of the present invention is directed to:

> A computer implemented method of matching a selectable user module with a plurality of programmable resources associated with an integrated circuit comprising:
> a. displaying said selectable user module, wherein said user module is a representation of a configuration of a programmable circuit;
> b. in response to a selection of said selectable user module, comparing a description of a hardware resource requirement of said selectable user module with a description of said plurality of programmable resources associated with said integrated circuit; and
> c. identifying a first allowed programmable hardware resource on the integrated circuit satisfying the hardware resource requirement of said selectable user module.

Claims 15, 18, and 26 recite similar limitations. Claims 4, 7, 8, and 10-14 are dependent upon Claim 1, and recite further features of the claimed invention. Claims 19-24 are dependent upon Claim 18, and recite further features of the claimed invention. Claims 27-32 are dependent upon Claim 26, and recite further features of the claimed invention. The rejection suggests that Cooke et al. discloses every limitation of the embodiments of the present invention recited in Claim 1. Applicants respectfully disagree.

The rejection suggests that Cooke et al. shows selecting a user module, and equates Cooke et al.'s discussion of "blocks" with the present invention's selectable user modules. Applicants assert that Cooke et al.'s blocks are not equivalent to selectable user modules as claimed, and that Cooke et al. fails to show displaying a user module, as claimed. Applicants understand Cooke et al. to describe systems and methods for designing an integrated circuit, see ¶ 17. "Blocks," as used by Cooke et al., describe pre-designed and pre-hardended circuit designs in software which can be used in larger circuit designs; see ¶ 6. Cooke et al.'s blocks are chunks of circuitry that may be dropped into a circuit design. When a circuit design is finished, it is ready for fabrication; see ¶ 36.

The selectable user module of the present invention is not such a chunk of circuitry because it contains information regarding the programming of a programmable circuit. As described in the specification, and as known to one having ordinary skill in the art, a user module is used in programming a programmable integrated circuit. As recited in Claim 1, such an integrated circuit has a plurality of programmable resources. A user module is used to configure some portion of these resources, unlike the target "block" of Cooke et al.

Applicants have reviewed Cooke et al., and nowhere does Cooke et al. discuss the matching of a selectable user module with the programmable resources of an integrated circuit, as claimed. As such, Applicants assert that Cooke et al. fails to anticipate or

render obvious the embodiments of the present invention recited in Claims 1, 15, 18, and 26.

The rejection also suggests that Cooke et al. shows comparing a description of a hardware resource requirement of the user module with a description of the plurality of programmable resources on the integrated circuit. Applicants respectfully disagree. The portion of Cooke et al. cited by the rejection describes the operation of some mass storage device containing a database; see ¶ 40. In addition to the disparity between Cooke et al.'s "blocks" and the selectable user module of the present invention, Cooke et al. does not disclose or suggest comparing a description of a hardware resource requirement of the selectable user module with a description of the plurality of programmable resources associated with said integrated circuit, as claimed. While Applicants acknowledge that Cooke et al. suggests that circuit designs be tested for correct operability, ¶ 36, Cooke et al. never compares a selectable user module's hardware resource requirements with the *programmable* resources of an integrated circuit. As such, Applicants assert that Cooke et al. fails to anticipate or render obvious the embodiments of the present invention recited in Claims 1, 15, 18, and 26.

The rejection further suggests that Cooke et al. identifies a first allowable programmable hardware resource on the integrated circuit satisfying the hardware resource requirement of the user module. Applicants respectfully disagree. As noted previously, Applicants assert that Cooke et al. does not show selectable user modules, as

claimed. Additionally, Applicants understand the portion of Cooke et al. cited as support by the rejection to discuss testing the physical layout of an integrated circuit before fabrication; see ¶ 36. This testing for the correct operation of the physical layout of an integrated circuit is in no way analogous to identifying a first allowed programmable hardware resource on the integrated circuit satisfying the hardware resource requirement of the selectable user module, as claimed. Cooke et al. does not discuss matching programmable resources with the requirements of a selectable user module in any way. As such, Applicants assert that Cooke et al. fails to anticipate or render obvious the embodiments of the present invention recited in Claims 1, 15, 18, and 26.

Therefore, the Applicants respectfully submit that the claimed embodiment of the invention as set forth in Claims 1, 15, 18, and 26 are in condition for allowance. Accordingly, the Applicants also respectfully submit that Claims 4, 7, 8, and 10-14, dependent upon Claim 1, Claims 19-24, dependent upon Claim 18, and Claims 27-32, dependent upon Claim 26, overcome the basis for rejection under 35 U.S.C. 102(e), as they are dependent on allowable base claims.

35 U.S.C. 103(a) Rejections

Claims 2, 3, 5, 6, 9, 16, 17, 25, and 33 are rejected under 35 U.S.C. 103(a) as being obvious over Cooke et al.

The Examiner is respectfully directed to independent Claim 1, reproduced above. Independent Claims 15, 18, and 26 recite similar limitations. Claims 2, 3, 5, 6, and 9 are

dependent upon independent Claim 1, and recite further features of the claimed embodiments. Claims 16 and 17 are dependent upon independent Claim 15, and recite further features of the claimed embodiments. Claim 25 is dependent upon independent Claim 18, and recites further features of the claimed embodiments. Claim 33 is dependent upon independent Claim 26, and recites further features of the claimed embodiments.

With respect to Claims 2, 3, 16, 17, 25, and 33, the rejection recites that Cooke et al. recites every element of the claimed invention, except that Cooke et al. does not expressly teach XML data. Applicants respectfully disagree, for the reasons set forth above in response to the 35 U.S.C. 102(e) rejection of Claim 1, that Cooke et al. teaches any element of the claimed embodiments.

The rejection further suggests that the limitation of XML does not alter how the method described in the specification functions, and is therefore not patentably distinct from the independent Claims. Applicants respectfully disagree. Applicants assert that one having ordinary skill in the art would understand the limitation of using XML data to place additional restrictions on the embodiments of the present invention recited in Claims 2, 3, 16, 17, 25, and 33, in that XML data conforms to a specific set of restrictive formatting rules.

Applicants also respectfully disagree that a motivation to combine Cooke et al. and the use of XML would arise out of a desire to use the present invention in various

fields of endeavor as the data suggests. Applicants understand XML to be used in many fields of endeavor, and not limited to Internet usages, as the rejection suggests.

Therefore, Applicants respectfully contend that Cooke et al. fails to anticipate or render obvious the embodiments of the present invention recited in Claims 2, 3, 16, 17, 25, and 33. Accordingly, the Applicants respectfully submit that the claimed embodiment of the invention as set forth in Claims 2, 3, 16, 17, 25, and 33 overcome the basis for rejection under 35 U.S.C. 103(a), and are in condition for allowance.

With regards to Claims 5 and 6, the Examiner is respectfully directed to independent Claim 1, reproduced above. Claim 5 is dependent upon independent Claim 1, and recites additional features of the claimed embodiments. Claim 6 is dependent upon Claim 5, and recites additional features of the claimed embodiments.

The rejection suggests that Cooke et al. teaches every element of the embodiments recited in Claim 5, and that the recitation of identifying a second allowed programmable hardware resource associated with said integrated circuit satisfying the hardware resource requirement of said selectable user module is mere duplication from Claim 1. Applicants respectfully disagree. As noted above, Applicants assert that Cooke et al. fails to show any of the elements of Claim 1, from which Claim 5 depends.

Further, Applicants assert that identifying a second allowed programmable hardware resource associated with the integrated circuit satisfying the hardware resource requirement of the selectable user module is not mere duplication of parts. Applicants contend that identifying a second allowable usage of programmable resources, as claimed, has additional value, in that a user is provided with additional options in determining how best to utilize or optimize available programmable resources. This additional value is added by the limitation of Claim 5, and is clearly not inherent in the embodiments of the invention disclosed in Claim 1.

Therefore, Applicants assert that Cooke et al. fails to anticipate or render obvious the embodiments of the present invention recited in Claim 5. Accordingly, Applicants also assert that Claim 6 overcomes the grounds for rejection under 35 U.S.C. 103(a), as being dependent upon an allowable base claim.

Regarding Claim 9, the Examiner is respectfully directed to independent Claim 1, recited above. Claim 9 is dependent upon Claim 1, and recites further features of the claimed embodiments.

As discussed previously, Applicants assert that Cooke et al. fails to anticipate or render obvious the embodiments of the present invention recited in Claim 1. The rejection deems that the limitation of Claim 9, that the disallowed programmable

resource be highlighted in gray, would be obvious to one having ordinary skill in the art. The rejection takes Official Notice that highlighting the disallowed programmable resource in gray is well known in the art. Applicants respectfully disagree with this assertion, and object to Official Notice being taken. Applicants assert that Cooke et al. does not show identifying allowable programmable resources, as claimed. Nor does Cooke et al. show identifying disallowed programmable resources, as claimed. Nor does Cooke et al. show highlighting disallowed programmable resources using a graphical user interface, as claimed. As such, Applicants assert that it cannot be obvious to one having skill in the art, provided Cooke et al., to highlight the disallowed programmable resource in gray. Applicants respectfully request a citation to some authority showing that that highlighting the disallowed programmable resource in gray is well known in the art.

Moreover, the act of highlighting or otherwise indicating disallowed programmable resources for a particular user module drastically improves the design cycle time for implementing the user module. This feature also reduces the manual trial and error that a circuit designer often faces with programmable logic. Cooke et al. simply does not teach or suggest this limitation, nor does Cooke et al. demonstrate an appreciation of the problems described above.

Applicants assert that Cooke et al. fails to anticipate or render obvious the embodiments of the present invention recited in Claim 9.

Conclusion

In light of the above-listed amendments and remarks, Applicants respectfully request allowance of the remaining Claims.

The Examiner is urged to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Respectfully submitted,

WAGNER, MURABITO & HAO LLP

Date: 12/12, 2005

Kevin A. Brown
Reg. No. 56,303
Two North Market Street
Third Floor
San Jose, California 95113
(408) 938-9060